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HISTORICAL NOTICE OF SAINT PAUL'S SCHOOL.

THE PRESENT FAÇADE OF ST. PAUL'S SCHOOL.

II.

THE appearance of St. Paul's School soon after its completion is thus noticed by Erasmus in a letter to Justus Jonas. After expressing his admiration of the motives of the founder in originating this splendid establishment, he speaks of the division of the school into four apartments. "The first, namely, the porch and entrance, is for *Catechumens*, or the children to be instructed in the principles of religion; where no child is to be admitted but what can read and write. The second apartment is for the lower boys, to be taught by the second master or usher: the third for the upper forms, under the head master; which two parts of the school are divided by a curtain to be drawn at pleasure. Over the master's chair is an image of the Child Jesus, of admirable work, in the gesture of teaching; whom all the boys, going and coming, salute with a short hymn; and there is a representation of God the Father, saying 'Hear ye Him;' these words being written at my suggestion. The fourth, or last apartment, is a little chapel for Divine Service. The school has no corners or hiding-places; nothing like a cell or closet. The boys have their distinct forms or benches, one above another. Every form holds sixteen, and he that is head, or captain of each form, has a little kind of desk by way of pre-eminence. They are not to admit all boys of course; but to choose them in according to their parts and capacities.

The wise and sagacious founder saw, that the greatest hopes and happiness of the commonwealth were in the training up of children to good letters and true religion; for which noble purpose he laid out an immense sum of money, and yet he would admit no one to bear a share in this expense. Some person having left a legacy of 100*l.* sterling toward the fabric of the school, Dean Colet perceived a design in it; and by leave of the bishop, got that money to be laid out upon the vestments of the church of St. Paul.

After he had finished all, he left the perpetual care and oversight of the estate and government of it, not to the clergy; not to the bishop; not to the chapter; nor to any great minister at court; but amongst the married laymen; to the Company of Mercers, men of probity and reputation. And when he was asked the reason of so committing the trust, he answered to this effect—that there was no absolute certainty in human affairs; but, for his part, he found less corruption in such a body of citizens, than in any other order or degree of mankind.

While preparations were being made for opening the school, Dean Colet drew up his *Rudiments of Grammar*, with an *Abridgment of the Principles of Religion*, for the standing use and service of St. Paul's School, This work, which soon became known under the term, *Paul's Accidence*, was dedicated to the new master, Mr. William Lily, in a short, elegant Latin epistle. The introduction contained the rules for the admission and conduct of the scholars, which were to be read over to the parents when they first brought their children. These rules embodied the regulations contained in the statutes, of which an abstract has been already given. This little work was found to be so useful, and the rules respecting the children so judicious, that when Cardinal Wolsey had founded a school in his native town of Ipswich, he reprinted Dean Colet's work for its use.

Shortly after this, Colet prepared another work, entitled, *The Construction of the Eight Parts of Speech*, which he sent to the head-master of his school, with the

following letter: "Methinks, my dear Lilye, I bear the same affection to my new school, as a parent does to his only son; to whom he is not only willing to pass over his whole estate, but is desirous even to impart his own bowels also: and as the father thinks it to little purpose to have a son, unless by diligent education he raises him up into a good and useful man, so to my own mind it is by no means sufficient that I have raised this school, and have conveyed my whole estate to it (even during my own life and health), unless I likewise take all possible care to nurture it in good letters and Christian manners, and bring it on to some useful maturity and perfection. For this reason, master, I send you this small treatise of *The Construction of the Eight Parts of Speech*, small indeed in itself, but such as will afford no small advantage to our scholars, if you diligently teach and explain it. You know, Horace was pleased with brevity in the way of teaching, and I very much approve of his opinion in that matter. If in the reading of the classic authors, any notable examples to these rules shall offer themselves, it will be your part to mark them, as they shall occur. Farwel. From my house, 1513."

The dean requested Lily to amend and improve this work, and then return it to him. This having been done, the dean sent the work to Erasmus, requesting that eminent critic to put the finishing touches. He did so, and published his edition of the work at Basil, in August, 1515, in which he spoke of the laudable anxiety which Dean Colet had for his school, and how careful he was to make the work pass through several hands, that it might be the more correct and complete.

Dr. Knight remarks that "it redounds not a little to the honour of this school, that not only the Latin grammar is owing to the skill and care of the founder, and the first master of his school; but also the common Greek grammar, used throughout England by the same authority as the Latin, was composed by the great Mr. Camden, who had been a Paul's scholar."

The ancient school-house was burned down in the great fire of 1666. It was rebuilt in 1670 by the active zeal of the Mercers' Company, at which time the Library was added.

About the year 1825, this structure having become ruinous, and in other respects inconvenient, it was pulled down, and the present elegant buildings erected. They are nearly in the form of a parallelogram, extending north and south opposite the chancel of St. Paul's Church. The two wings contain each two houses, the northern of which is occupied by the high-master and the chaplain; and the southern, by the sur-master and the assistant-master.

The school-room is large and commodious, and is ornamented with a bust of the founder, copied and improved by Bacon*; there is also a bust of Mr. George Thicknesse, who was high-master from 1748 to 1769; and one of Dr. Roberts, high-master from 1769 to 1814. Alderman Boydell presented a number of emblematical engravings, which formerly were used to decorate the upper end of the school in the day of apposition, but they are no longer used for that purpose.

The admission of the scholars is in the Mercers' Company; the surveyor-accomptant, one of the court of assistants, being the officer delegated by them to nominate during his year of office. There is no limit as to the age at which scholars are admitted; but no boy is eligible to an exhibition if he is admitted after the age of ten; and no boy is expected to remain at the school after his nineteenth birthday. The instruction given is in the classics and mathematics, and without any other charge than the payment of one shilling to the porter, on the entrance of each boy. The holidays are a week at Easter; six weeks at Midsummer; a month at Christmas; and such anniversaries as the Queen's birthday; the founder's day; Ash Wednesday; coronation day; Lord Mayor's day, &c. Tuesday, Thursday, and Saturday in every week are considered as half-holidays. The school begins at eight o'clock in the morning, and continues till twelve. On Monday, Wednesday, and Friday there is school in the afternoon from one till four.

The grand examination of the scholars occupies the first three days of the fourth week after Easter; on the fourth day is "the apposition*," a term peculiar to St. Paul's School, when it is usual to commemorate the founder by an oration in Greek, Latin, or English, composed and recited by the senior boy. These are succeeded by four exercises in Greek Iambics, Latin Hexameters, English and Latin prose; for the three former of which there are prizes, founded by the trustees; for the last (the Latin essay) the High Master's Prize, founded by the Rev. Dr. Sleath.

Some time after the apposition the trustees meet at Mercers' Hall to hold "the apposition court" for transacting business relating to the school,—such as giving away exhibitions, &c.

The exhibitions have been recently regulated as follows:—

I. Out of the general revenue of the school it has been determined by the governors to give every year to the scholar who shall pass the best examination, an exhibition of 120*l.* a year, tenable at any college in either University for five years.

II. A sum of money was left by the Lord Viscount Camden, A.D. 1633-4, for the foundation of exhibitions for such scholars as should proceed to Trinity College, Cambridge. Of these, two are now given annually of the value severally of 100*l.* and 80*l.* a year, tenable also for five years.

III. Out of the general revenue another exhibition is also founded of the yearly value of 50*l.*, tenable, as the first, without restriction.

IV. Two exhibitions at Trinity and St. John's, Cambridge, founded by Mr. Perry and Dr. Gower, of the value of 13*l.* a year.

V. An exhibition, founded by Mr. Stock, 1780, at Corpus Christi, Cambridge, of the yearly value of 30*l.*, with the accumulation during a vacancy, except 15*l.* paid to the college. Given to a scholar nominated by the high-master.

VI. Four exhibitions, value 10*l.* a year each, founded by Mr. George Sykes.

The exhibitioners are chosen by the court of assistants of the Mercers' Company (the trustees of the school), after a strict examination of the whole school by two examiners. No scholar is eligible unless he have been full four years upon the foundation of the school, and admitted under the age of ten.

In addition to these exhibitions, the Paulines (as the scholars of this school are usually called) are further encouraged by prizes given annually by the governors. These prizes are,—1. For Greek verse translation; 2. For Latin verse translation; 3. For the best English essay; and 4. For the best Latin essay. This last prize was founded by the late high-master, the Rev. Dr. Sleath. Prizes are also given at the time of the apposition to boys throughout the school who have distinguished themselves by good behaviour and attention to their studies.

It is most gratifying to remark, (says Mr. Nicholas Carlisle,) that the Company of Mercers, by their good management of the revenues of the school, have always been enabled to have a fund to supply the wants of their more indigent scholars; and, by their faithful discharge of the trust reposed in them, have secured the highest respect to the foundation, as will ever claim the most grateful remembrance, and be a lasting monument of their unsullied honour, assiduity, and care.

It has been the wish of some of the Mercers' Company to enlarge the school, and also to afford additional education; it having been thought that it might be of importance to afford them the advantage of writing, learning accompts, and the lower branches of the mathematics. The founder certainly never had any idea of establishing a large free-

* The original bust of the founder was discovered among the ruins of the school after the great fire. When Bacon's bust superseded it in the school-room, the high-master, Dr. Roberts, removed it to his house and placed it over the exterior of his drawing-room door.

* *Apposer* signifies *examiner*. In the Court of Exchequer there is an officer called "the Foreign Apposer." In the office of Confirmation in the first Liturgy of Edward the Sixth, the Rubrick directs the bishop, or such as he shall appoint, to *appose* a child. The term *appose* occurs also in the statutes of St. Saviour's school.

school, and annexing it to the grammar school, because he has expressly declared his intentions that it should be a grammar school only, and that no more than one hundred and fifty-three boys should be educated here. By the statutes, however, the trustees are invested with unlimited powers as to making any alteration, either in the site of the school or otherwise, as it shall seem to them advantageous to the institution.

Since Mr. Carlisle wrote, mathematics have been introduced into the school with the greatest success.

The gross annual income of the school, at the time of the parliamentary inquiry, was about 5300*l.* per annum, arising from landed estates and the interest of money in the funds, being 26,000*l.* stock. The masters have each an annual salary, together with a spacious house in St. Paul's Churchyard. There is also a house at Stepney appropriated to the high-master.

The Company has sometimes thought fit to reward munificently the labours of the high-master. The Rev. Dr. Roberts, who occupied that dignified station about forty-five years, retired on an annuity of 1000*l.*

THE ART OF READING.

V. Improvers of the Phonic Method.

Contemporary with Olivier was Dr. Henry Stephani, who did much in making the method popular, and directing general attention to it. He published the following works, in which it is remarkable how gradually he announced and impressed his fundamental principles. —1. "Instruction in the most Correct and Easy Method of Teaching Children to Read." 1803.—2. "Elementary Book for Teaching to Read, together with a Wall-Tablet, and Instructions for its proper Use." 1804.—3. "An Inquiry into the Names of the Letters of the Alphabet." 1806.

Stephani must be considered inferior to Olivier, as a teacher of the Phonic method. His attempts savoured more of the old plan, and were, therefore, more popular with individuals who felt prejudiced against a complete change. He also wrote in a modest and diffident style, and therefore made a more favourable impression than Olivier. Stephani, like his predecessor, required the organic formation of sounds to be known: this is good as respects teachers, but bad for the scholars. It is quite sufficient for the child to hear and see how the sound is produced, and it is too much to expect that the position of lips, tongue, and teeth should be noticed, as it respects the production of each sound. The teaching of sounds in the order of their simplicity was, perhaps, more successfully treated by Stephani than it had previously been. He first taught the fundamental sounds *a e i o u*, then the double vowels, *au, ei, ou*, &c., then the consonants, in the order of *tone* consonants, or those requiring a lengthened tone in utterance; bursting sounds, or consonants abruptly uttered; and hissing sounds, or consonants to which a hissing utterance must be given. Simple syllables were then taught, and the rule applied of adding gradually new sounds to those already acquired.

There was at this time another teacher in the field, John Frederick Adolphus Krug, Director of Schools at Dresden, who also began to publish so early as 1806. He had gained his first ideas of the Phonic method at the establishment at Leipzig, where Olivier had first introduced it. Krug introduced his own variations of it at Zittau in 1809, and afterwards at Dresden. In 1835 his mode of teaching, as modified and improved by Schulze, was formally recommended by Government for adoption in all the elementary schools of Saxony: but it was nevertheless open to any schoolmaster to receive or reject it at pleasure. Krug died at Dresden during the present year (1844). Among his early publications were, 1. "German Tablets for Teaching Correct Speaking, Reading, and Writing."—2. "Syllable, Reading, and Speaking Exercises for Public Schools and Private Instruction."—3. "First Reading-Book for Schools."—4. "The World of Rhymes for Children." In 1808, thinking that he had perfected his method, he published an extended course of instruction for teaching reading and writing. As far as profound views of language went, Krug was equal to Olivier, but he did not render his method simple enough to be generally applicable. He began his elementary instruction with preliminary exercises, intended to excite attention, and to prepare for exercises on the organic formation. This preliminary instruction related,—1st. To the formation of vowels, as due to articulate sounds.—2nd. To the formation of the consonants, as due to articulate sounds.—3rd. To the union of vowels and consonants in syllables, words, and sentences. His letters were divided into tones and articulations, and the various subdivisions of each of these were too complicated for children, and indeed for the majority of teachers. To give some idea of the extent to which he carried his system, we may state that a special direction was separately given for the organic formation of every sound in the language. The children were taught the position of the organs of speech necessary to produce each sound, before they were made aware of the sound itself; and by dint of much drilling these little soldiers were taught to manœuvre their vocal batteries, so as to send forth, at a given signal, the required sound. For example; the teacher would give the word of command thus—"mouth round,"—"contract tongue." This being done, the children were kept waiting with their mouths in this position until the teacher said "breath," when the second long *a* was produced. This sort of teaching appears ridiculously minute, and the trouble of conveying it seems far greater than the advantages derivable from it. It is but fair, however, to add, that as all the sounds were classified, the affair was less complicated than it at first appears. In the various sounds which require "mouth round," the direction was not repeated, but only the little modification necessary to produce other sounds. The results produced by Krug were, however, most extraordinary. His pupils became so expert that, simply by giving out directions to the class, as to the position of mouth, lips, tongue, teeth, &c., words, and even tolerably long sentences, were produced by the children. This was considered as a great triumph of the method, but it is doubtful whether the result be worth the laborious steps necessary to its acquirement. Part of the directions given to the children at different stages of their progress were put into easy verse.

Dr. Hergang, who was well acquainted with Krug, and watched the progress and success of his method, says of it, "It is skilfully, far too skilfully conceived. If one should attempt to spin out the whole according to the directions given, so complicated and ingenious a piece of tapestry is gradually produced, that the artist must labour long and earnestly, and painfully, ere he accomplishes it. In fact, Krug's method prolongs excessively the time usually devoted to the instruction of children in reading; it entails no inconsiderable difficulties, and for many children does not offer any superior advantages over other good Phonic methods. I have never found perfect satisfaction in it, and I have often been disposed to name it 'an attempt to facilitate the art of teaching to read by a very difficult process.'"

Still there were valuable points in Krug's method, which were not lost sight of by succeeding writers on the Phonic method, who now directed their efforts to the simplification of that which had become unnecessarily compendious. Among these writers one of the most distinguished is Dr. Schulze, of Dresden, who has made the Phonic method so simple, easy, and interesting to the pupil, that his plan of teaching is now adopted in nearly all the schools of Saxony. Nevertheless, he requires a deeper acquaintance with language on the part of the teacher than could generally be obtained, unless in a country where training-schools for teachers

are universal. The introduction of distinguishing marks over or under certain letters is due to this writer, and has proved highly useful in facilitating the acquirement of their sounds. Schulze was curate of the Leipzig establishment at the time the Phonic method was introduced there; hence his thorough acquaintance with the method to which he has rendered such essential service.

Among numerous variations, if not improvements, of the Phonic method, by the distinguished men already alluded to, must be mentioned the successful attempts to combine the teaching of reading and writing, now so well known in Germany as the *Schreiblese Methode*, Graser was the first to teach writing as a help to reading and he found the great advantage to be, that from the very commencement the child was actively employed in writing as well as reading letters, words, and sentences, which were of course arranged on a Phonic system. The most distinguished cultivator of this method is Dr. Diesterweg, of Berlin, who, in his *Wegweiser für Deutsche Lehrer*, remarks, that it requires greater skill and activity on the part of the teacher than the previous methods, and that it is liable to fail in the hands of teachers who have been accustomed successfully to instruct children in reading and writing in separate lessons.

The writer of these remarks has witnessed the admirable results produced by the *Schreiblese Methode*, in Dr. Diesterweg's establishment at Berlin, and must also give his testimony in favour of the Phonic method generally, as taught in many schools of Prussia and Saxony which he visited. It was to him a matter of surprise and delight, to see large classes of children engaged in learning to read, with a pleasure to themselves and a facility on the part of the teachers, which can never be obtained under the spelling method. Let us hope that good methods of teaching will ere long become equally prevalent in our own country, where numbers of intelligent teachers are rapidly rising, whose minds are free from the paltry prejudice of despising systems that are not the produce of their own land. The circumstances attending the introduction of the Phonic method in this country, and the manner in which it has been applied to English use, will next occupy our attention. The latter will lead to a detailed account of the method itself, which will be interesting to most of our readers.

AUTUMN.

TREE! why hast thou doffed thy mantle of green,
For the gorgeous garb of an Indian queen?
With the umbered brown, and the crimson stain,
And the yellow fringe on its broidered train?
And the Autumn gale through its branches sighed
Of a long arrear, for the transient pride.

Stream! why is thy rushing step delayed?
Thy tuneful talk to the pebbles staid?
Hath the spoiler found thee who wrecks the plains?
Didst thou trifle with him till he chilled thy veins?
But it murmured on with a mournful tone,
Till fetters of ice were around it thrown.

Rose! why art thou drooping thy beautiful head?
Hast thou bowed to the frost-king's kiss of dread?
When thou sawest his deeds in the withering vale,
Didst thou, lingering, list to his varnished tale?
And she answered not, but strove to fold
In her bosom the blight of his dalliance bold.

Yet ye still have a voice to the musing heart,
Tree, Stream, and Rose, as ye sadly part,
"We are symbols," ye say, "of the hasting doom
Of youth, and of health, and of beauty's bloom,
When Disease, with a hectic flush doth glow,
And Time steal on with his tress of snow."

Is this all?—is your painful lesson done?
And they spoke in their bitterness, every one—
"The soul that admits in an evil hour,
The breath of vice to its sacred bower,
Will find its peace with its glory die,
Like the fading hues of an Autumn sky."

MRS. SIGOURNEY.

THE CAUSE OF IRIDESCENCE.

IF a soap-bubble be blown up, and set under a glass, so that the motion of the air may not affect it, as the water glides down the sides, and the top grows thinner, several colours will successively appear at the top, and spread themselves from thence in rings down the sides of the bubble, till they vanish in the same order in which they appeared; at last a black spot appears at the top, and spreads till the bubble bursts. Hence it follows that the colours of a body depend in some degree upon the thickness and density of the particles that compose it; and that if the density be changed, the colour will likewise be changed. That the production of colours depends upon the nature of the surfaces upon which light falls, is beautifully exemplified by the iridescence of mother-of-pearl; and which has been satisfactorily shown to depend upon a singular peculiarity in the structure of that substance. On its surface, which, to the unassisted eye, and even to the touch, appears to be finely polished, there are innumerable little lines, or *grooves*, (in some places as many as two or three thousand in the space of an inch, which, lying parallel, regularly follow each other in all their windings,) by the edges of which the rays of light are reflected, and the continual change of colour arises from their continual bendings. Whatever doubts might have existed upon the subject, some late experiments of Dr. Brewster have dissipated them, by showing that the colours which play so beautifully on the surface of mother-of-pearl may be communicated by pressure to sealing-wax and several other substances. The discovery of this fact was in some measure accidental; he had stuck a piece of mother-of-pearl on a cement made of rosin and bees'-wax, and on separating this cement he found that it had acquired the property of reflecting colours. Several persons who witnessed the effect concluded that it arose from the presence of a thin film of mother-of-pearl, which might have scaled off and adhered to the wax; but such an explanation was at once refuted, by plunging the wax in acid, which must have dissolved the mother-of-pearl, had any been present: but the acid had no effect, and the colours of the impression remained unimpaired. It is clear, then, that it is the grooves, as Dr. Brewster conjectured, which occasion the iridescence in the mother-of-pearl, as well as in the waxen impression. In consequence of this curious discovery, Mr. Barton succeeded in producing the same appearance on glass, and on different metals, by cutting grooved lines on their surfaces. These lines are so fine that, without a microscope, they are scarcely visible, and the glass and the metal appear to retain their polish; yet they and the colours also may be communicated by an impression, like that from the mother-of-pearl to the wax. In like manner, the varying and delicate hues exhibited by the wings of certain butterflies, arise from the action of light upon the parallel and equidistant striæ upon their surfaces.—*Philosophy in Sport.*

ALL the knowledge we possess of external objects is founded upon experience, which furnishes facts; and the comparison of these facts establishes relations, from which induction the intuitive belief that like causes will produce like effects leads to general laws.—MRS. SOMERVILLE.

IN our early years, or more mature age, the power of employing ourselves in the retirement of our closet with any useful or agreeable occupation, banishes the dread of solitude. When soured by disappointment, we must endeavour to pursue some fixed and pleasing course of study. We never read without profit, if, with the pen or pencil in our hand, we mark such ideas as strike by their novelty, or correct those we already possess. Reading soon becomes fatiguing, unless undertaken with an eye to our own advantage, or that of others, and when it does not enrich the mind with new ideas. But this habit is easily acquired by exercise, and then books afford the surest relief in the most melancholy moments. Painful and disagreeable ideas vanish from the mind that can fix its attention upon any subject. The sight of a noble and interesting object, the study of a useful science, the varied pictures of the different revolutions exhibited in the history of mankind, the improvements in any art, are capable of arresting the attention, and charming every care; and it is thus that man becomes sociable with himself; it is thus that he finds his best friend within his own bosom.—ZIMMERMANN.

SKETCHES OF JAPAN AND THE JAPANESE.

JAPANESE IDOLS.

I.

GENERAL DESCRIPTION OF THE COUNTRY AND INHABITANTS. RELIGION. GOVERNMENT. ADMINISTRATION OF JUSTICE.

AMONG the few regions of the earth from which the adventurous traveller is effectually excluded, and of which, therefore, the European reader can obtain only partial, fragmentary, and doubtful information, there is hardly any which possesses so much interest, or which is more imperfectly known, than the empire of Japan. That here Christianity was once successfully preached, and was rapidly triumphing over the baneful superstitions of the land, until it excited the enmity of an unprincipled usurper, who succeeded, by means of a sanguinary persecution, in rooting out that religion to the truth of which multitudes of the native converts bore testimony by voluntarily embracing martyrdom rather than renounce it, is a melancholy fact, which increases our desire to know more of a people who were thus mysteriously consigned to centuries of pagan darkness, by the withdrawal of those beams of Divine truth which had been for a time revealed to them. Such, however, is the jealousy entertained of all foreigners by the government, that the laws are more unfavourable to intercourse with other countries than those of any other nation on the globe, not even excepting China. Our knowledge of the people is consequently confined to such incidental information as may be gleaned from the reports of the Jesuit missionaries of two centuries ago, together with such as in later times we derive from the narratives of one or two adventurers who have made abortive attempts to establish a mercantile connection with Japan, and from the accounts of the Dutch merchants, the only Europeans who are admitted for the purpose of trading. These, however, are fenced round with the most stringent regulations for the prevention of any confidential communication with the natives. Kæmpfer, Thunberg, and Siebold, the best authorities respecting Japan, were physicians attached to the Dutch factory, who have collected all the information they were able to obtain, surrounded as they were by the most jealous restrictions. An English work, of much interest, entitled, *Manners and Customs of the Japanese in the Nineteenth Century*, embodies in a convenient form much interesting information, gathered from various foreign writers, and we shall avail ourselves of its assistance in the notices we are about to lay before our readers.

The empire of Japan consists of a multitude of islands, said to be between three and four thousand in number, but many of which are uninhabitable rocks. The empire is divided into Proper Japan and the dependent islands. The former includes the three large islands of Nippon, Kiusiu, and Sitkokf. The dependencies are the large island of Yeso, with some of the Kurile Islands, and the southern districts of Tarakai. The geography of this part of the world is very imperfectly known, partly in consequence of the coasts being very difficult of access, from the shallowness of the sea and the numerous reefs and rocks scattered around, and partly from the jealous policy to which we have alluded. Nippon, or Nifon, the largest of the Japanese islands, is computed to present a surface of about one hundred thousand square miles, which is considerably larger than that of Great Britain. Yeso, which is next in size, is not much less than Ireland.

The Japanese name for the empire is Dai Nippon; Dai signifying *great*, and Nippon, *origin of the sun*, of which the Chinese form is Jihpun, whence the name Japan. The celebrated traveller, Marco Polo, calls it Zipangu. The country is hilly, populous, and very highly cultivated. Our readers will find an article on Japanese agriculture and gardening, in the *Saturday Magazine*, Vol. VI. p. 174.

The personal appearance of the Japanese betrays their Mongol origin, though they seem to be the most favourable specimens of the race. Klaproth considers them to excel the Chinese in energy, muscular and intellectual, and they are generally described as less cowardly, proud, cunning, and deceitful. They show a great desire for scientific knowledge, though mechanical inventions for superseding labour are discouraged. Their institutions for instructing the lower classes are stated to be eminently worthy of an enlightened people. Their civilization being originally derived from China, is characterized by the peculiarities of that country. In manufacturing industry they are in general nearly equal, and in some branches superior, to the Chinese.

The national religion of Japan is denominated *Sinsyu*, and its votaries are called *Sintoos*. It recognizes a plurality of gods, but, unlike other forms of polytheism, does not sanction idolatry. The sun-goddess, Tin-sio-dai-zin, whose spirit is supposed to be embodied in every reigning *mikado*, or ecclesiastical sovereign, is, it is said, the only divinity to whom worship is due; and she, being too great to be directly addressed in prayer, must be approached only through the mediation of her descend-

ant and representative, or of the inferior *kami*, or gods. The Sintoos seem to believe in the immortality of the soul, and a future state of retribution. But this religion, bound up as it is with the constitution and government of the empire, is not, it seems, incompatible with the coexistence of two other religions. Buddhism, the principal of these, and the most prevalent of all false creeds, inculcates the worship of images, and teaches the transmigration of the soul. The greater number of the people seem to follow a religion composed of Buddhism and Sinsyu blended together. The third Japanese creed is called *Sintoo*, or the way of philosophers, and seems rather to be a system of philosophy than a religion, as it does not inculcate any religious rites, but merely teaches the moral tenets of Kung-foo-tse, or Confucius.

The government of Japan is usually termed despotic, and is truly so in as far as it controls every action of the subject, to the entire extinction of individual freedom; but it is not arbitrary, as the laws are as binding upon the sovereigns as upon the meanest of the people; indeed, the higher the rank of the party, the more onerous appear the restraints to which he is subjected. European writers generally speak of Japan as governed by two emperors, one ecclesiastical and the other executive; but it seems that the former, the *mikado*, (literally, "the son of heaven,") is theoretically supreme, though in reality he is without any influence.

Formerly, the *mikado* was the real sovereign, but a few centuries ago, the chief general acquired so much power that he deprived the *mikado* of his influence, leaving him only the administration of ecclesiastical affairs. The *mikado* continued to be treated with divine honours, his very sanctity being a pretext for depriving him of secular power, which was centred in the *ziogoon*. But this latter potentate appears to have gradually lost his influence to the council of states, which now constitutes the real executive power. When any measure has been determined upon in this council, it is submitted to the *ziogoon* for his sanction. As that officer is so entirely occupied with the ceremonies which appertain to his dignity as to have little time to devote to the consideration of public affairs, this sanction is generally given without examination of the subject; but if he should withhold his fiat, the matter is referred to the arbitration of three princes of the blood. Should their decision be against the *ziogoon*, he must immediately abdicate in favour of the next heir, but if it should be against the council, the minister who was most forward in urging the obnoxious act, if not every member of the council, is compelled to commit suicide, according to the Japanese mode, by ripping himself up. The whole policy of the state seems based upon a system of espionage which pervades the whole framework of society, so that there is not a man of any consequence who has not among his servants many of the secret emissaries of the government. The Japanese ceremonials and enactments are so severe in their restraints that the enforcement of the legal penalty for every infraction of them would be altogether intolerable; the law therefore is modified by much connivance, so that many infractions of it are allowed to remain *nayboen*, a term designating the professed concealment of something generally known.

In no other country is the possession of every degree of dignity attended with so much care and annoyance, and, as a consequence, no where else is the abdication of power more common. The *mikado* is condemned to close imprisonment within the walls of his palace, in order that he may not be subject to the glance of any unhallowed eye. Every article he uses must be incessantly renewed, as it is destroyed as soon as used, in order that it may not be profaned by any human touch. The consequence is that the *ziogoon*, who has to support the Son of Heaven, supplies him with everything of the cheapest description, for the continual renewal of every article, clothes daily, and some things h orly, would be too expensive if they were of good quality. The mikado must every day pass a certain number of hours on his throne, without making the slightest movement, lest he should discompose the tranquillity of the realm. When the prescribed time has elapsed, he leaves his crown as his substitute upon the throne. After this glance at some of the duties of this nominally supreme sovereign, it is hardly surprising to find that he is not always reconciled to his onerous state, even by the permission to espouse twelve lawful wives, while his subjects are each restricted to one. The *mikado*, accordingly, frequently abdicates in favour of a son or a daughter, for there are many instances of females being invested with this dignity. When an abdication takes place, the change of reign is announced to the empire, but when a reigning *mikado* dies, his death is *nayboen* till the new sovereign is installed, and then it is proclaimed that his predecessor has vanished; for in what other form could the demise of so august a personage be announced?

The princes, called *kok-syve*, or lords of the land, are nominally absolute in their respective provinces, but they are so much interfered with in all their actions, whether public or private, by the mandates of the ziogoon and his council, that in no class is the practice of *inkioe*, or abdication in favour of the heir, more prevalent. They are always kept in a state of poverty, for if it should be found that any one of them was amassing property, and such an event would be immediately communicated to the council by some of the spies who surround them, it is soon reduced, either by a direct impost, or by the donation of some honour which forces the favoured individual to incur a greater expense than his fortune is able to sustain.

The population is divided into eight classes, namely: 1, the princes or governors; 2, the nobility; 3, the priesthood, both Sintoo and Buddhist; 4, the military; 5, inferior officials and medical men; 6, merchants; 7, petty shopkeepers and artisans; 8, peasantry and day-labourers. Tanners, and all who are in any way connected with the manufacture of leather, are excluded from every class, and looked upon as outcasts from society. These classes are hereditary, and it is the duty of every one to continue in that wherein he was born, from which he can be raised only by some very extraordinary circumstance, while it is infamous to sink below it. The first four classes have the privilege of wearing two swords and the *hakama*, or petticoat trowsers, the distinctive marks of the higher orders. The fifth class is composed of what are considered respectable persons, who are permitted to wear one sword and the trowsers. In the sixth class are found the only wealthy individuals in Japan, but they are viewed by the upper ranks with the greatest disdain.

The Japanese laws make little distinction between different degrees of crime, and are very severe in the punishments they inflict. They are administered with great care and impartiality. As the passing of a sentence of death involves the confiscation of the criminal's property, and the disgrace of his family, these are sometimes averted by a *nayboen* form of death before sentence. It is customary, among the higher orders, to have recourse to suicide, by ripping up the abdomen according to the Japanese mode, as soon as the individual considers himself in danger of capital punishment; but when he is seized before he has had time to have recourse to the *hara-kiri*, or "happy dispatch," as this form of death is termed, the judicial authorities are frequently desirous of sparing the family. In this case the prisoner is sometimes supplied with a weapon with which to dispatch himself; but as this is attended with risk to those who furnish it to him, it is more common to order him to be examined under the torture, at the same time informing the executioner that he will not be held responsible if the criminal should expire during the opera-

tion. The death of the prisoner is afterwards announced as if it had been natural, and as he had not been convicted, the body is delivered to his friends for interment.

A PSALM OF LIFE.

TELL me not in mournful numbers,
"Life is but an empty dream!"
For the soul is dead that slumbers,
And things are not what they seem.
Life is real! life is earnest!
And the grave is not its goal;
"Dust thou art, to dust returnest,"
Was not spoken of the soul.
Not enjoyment, and not sorrow,
Is our destined end and way;
But to act, that each to-morrow
Find us farther than to-day.
Art is long, and time is fleeting,
And our hearts, though stout and brave,
Still, like muffled drums, are beating
Funeral marches to the grave.
In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle!
Be a hero in the strife!
Trust no future howe'er pleasant!
Let the past bury its dead!
Act—act in the living present!
Heart within, and God o'erhead!
Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footsteps on the sands of time;
Footsteps, that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother
Seeing shall take heart again.
Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour, and to wait,—LONGFELLOW.

DELUDE not yourself with the notion that you may be untrue and uncertain in trifles, and in important things the contrary. Trifles make up existence, and give the observer the measure by which to try us; and the fearful power of habit, after a time, suffers not the best will to ripen into action.—C. M. VON WEBER.

THERE are few phenomena in nature much more striking than the luminous appearance exhibited by the water of the ocean, particularly in tempestuous weather, terrific in particular to landsmen in these cases, as it is resplendent and beautiful in the calms of summer. It has accordingly not only been an object of much remark among common observers, but has excited the attention of naturalists at all times, so as to have led to much discussion. From the time of Pliny, downwards, frequent inquiries have been made respecting the cause, and accordingly many different theories have been proffered. It was long taken for granted that this property belonged to the water itself, and not to any bodies contained in it. Mayer, and others who followed him, considered that this phenomenon depended on the same cause as the light emitted by the diamond and other substances after exposure to the sun's rays. Others were content with calling the light phosphoric, and with supposing that sea-water was endowed with the property of phosphorescence. Another party attributed the light to the putrefaction of sea-water, although it was not explained what the connection was between putrefaction and phosphorescence. The experiments of Dr. Hulme made a nearer approximation to the true cause, by showing that the luminous secretion, or matter attached to the mucus of certain fishes, was diffusible in water. Later, or more accurate naturalists, and seamen also, have, however, observed that some marine worms and insects were luminous; and thus it was admitted that some at least, of the luminous appearances of the sea might be produced by these: but to Dr. Macculloch we are indebted for having first brought the whole of this question into one clear point of view, in his work on the Western Islands of Scotland, and for so great an extension of the luminous property to the marine species, as to have erected this into a general law.—BREWSTER.

SEA-STARS.

III.

"THE brittle-stars are at once recognised as distinct from the true ophiuræ, either alive or dried, by their peculiar habit, as well as by minute but more easily definable characters. The rays of the sand-stars have a whip-like, or lizard-tail appearance; those of the brittle-stars look like so many centipedes or annelides, attached at regular distances round a little sea-urchin. The latter are much more flexible than the former, more irritable, more brittle, nevertheless much more tenacious of life. When dried, the ray-spines of the brittle-stars stand out from the ray; whereas in the preserved sand-star they are appressed to its sides. The cirrhi, too, which are seen between each row of spines in the living animal, are pinnate, or as if covered with short tubes in the ophiocomæ. The brittle-stars are much more active animals than the ophiuræ; they seldom remain quiet for a moment, but are continually twisting about their arms, and if laid hold of they break up into little pieces with wonderful facility, each fragment of an arm also breaking itself up into smaller pieces; and frequently when we seize one of these creatures, in a moment we find nothing but the disk remaining. They can re-produce their arms in the same manner as the *asteriadæ*."—FORBES.

The above excellent definitions are taken from the *History of British Star-fishes*, to which we must refer the reader for many interesting particulars respecting the various species of brittle-star, a few of which only can be noticed here.

The common brittle-star is one of the most beautiful and most interesting of its kind. It is so varied in its colours that two are seldom found alike; but in most cases the animal displays the richest hues, arranged in handsome patterns. In brittleness it exceeds all the other species: "touch it, and it flings away an arm; hold it, and in a moment not an arm remains attached to the body." This animal appears to be abundant on all parts of the coast of Britain and Ireland, and in many places it is found on the shore at low water. This is sometimes the case in the rocky portions of our eastern shores; but more commonly on the west coast of Scotland. It attains a much larger size in Shetland than elsewhere, the spines of specimens taken there being very long. The strange contortions of these animals when brought up in the dredge, afford a curious spectacle. "I have seen," says Mr. Forbes, "a large dredge come up completely filled with them; a most curious sight, for when the dredge was emptied, these little creatures, writhing with the strangest contortions, crept about in all directions, often flinging their arms in broken pieces around them, and their snake-like and threatening attitudes were by no means relished by the boatmen, who anxiously asked permission to shovel them overboard, superstitiously remarking, that 'the things weren't altogether right.'"

The body of this animal is round, convex, and thickly covered with bristles, except on those portions which are opposite to the origin of the rays or arms. The rays themselves are covered above with small triangular pointed scales, overlapping each other; beneath, they are clothed with oblong plates. The rays are usually four or five times as long as the disk or body of the animal is broad. They are usually white or grey, banded with bright pink. They are fringed at each side with long tapering spines, which are twice or three times as long as the breadth of the ray. These spines, when magnified, present a complicated structure, and are found to be fringed with smaller spine-like processes, which is the cause of a slight roughness of their surfaces, perceptible to the touch. Sometimes these spines are of a beautiful rose-colour; but they are also frequently seen with brown tips and deep blue bases. The rays themselves are often deep blue, or banded with

SPINE OF THE BRITTLE STAR. (*Magnified.*)

bright yellow, or speckled with brown and orange. Little red spots are often seen at each of the points where the rays join the body; but as these are not constant, nor always of the same form, they are not considered to be the organs of sight. The disk or body of the animal generally measures four-tenths of an inch across, and is equally distinguished with the rays and spines for its variety of colours. It is sometimes of a dusky rose-colour, with grey scales; sometimes white, spotted with red, often marked with a star of red or yellow; and occasionally nearly black. Round the mouth of the animal are twenty tentacula or feelers, ten external and ten internal. The food of this species is said to be small crabs, and other minute kinds of shell-fish.

Although this species of brittle-star is more conspicuous than others, by reason of its common occurrence, and the beautiful colours which distinguish it, yet there are other species more curious in form, and equally interesting in habit. One of these is described as the "thread-rayed brittle-star," and was found by Professor Forbes in the bay of Rothsay during the month of July, 1839. "Of this most curious of ophiuræ," he says, "I first found one of the thread-like arms winding amongst the mud. Arm after arm occurred, but no body; at length a skeleton of a body was found, and when I had almost begun to despair of finding anything like a disk, an almost perfect specimen appeared. A few days after, dredging on similar ground in the Gair Loch, opposite Greenock, I was astonished by the sight of masses of interlacing arms of the same animal, as large as a man's fist, coming up in the dredge. They were all alive, and twisting in every direction; yet, strange to say, there were no more than seven or eight disks secured, although several hundreds of arms were taken." This is accounted for by the fact, that the disk or body of this species is very soft, and was therefore rubbed away from the arms, or entirely destroyed by the rough usage it met with in the dredge on its way to the surface.

The arms of the thread-rayed brittle-star are extremely long, being in some cases ten or twelve times as long as the breadth of the disk, but the spines that clothe them are much shorter than those of the common brittle-star, being scarcely as much as half the breadth of the arm itself. The body is dark reddish-brown; the arms red or flesh-colour, with a reddish line down the centre. Professor Forbes was the first to notice a remarkable peculiarity in the organization of this star-fish, which is, that a certain portion of the spines differ from the rest, and from the spines of all other described ophiocomæ, in being longer than the others, and being furnished at their extremities with two transverse curved spiny processes, giving to each such spine exactly the form of a pickaxe. The reason for this curious apparatus is explained by reference to the habits of the animal. This species of brittle-star lives in soft slimy mud, and needs a special provision to enable it to move about in this medium. "The position, the increased size, and the pickaxe heads of these strange spines, are just the modifications of structure especially adapted to further locomotion in such a locality. They may be compared to the lateral hooks or bristles of many earth-boring annelides, and serve for the same purposes. The contrivance is a very beautiful example of the adaptation of organization to the locality in which the creature is destined to live."

Equally curious is another species called the long-armed brittle-star, discovered and described by Colonel Montague. He mentions a specimen in his own cabinet, whose body was only three-eighths of an inch in diameter, but which had arms seven inches in length, or more than eighteen diameters of the body, a disproportion not before noticed in any species of star-fish. This animal was taken in sand, at one particular part of Salcombe Bay, where that article is collected for manure. "The only perfect specimens obtained," says the discoverer, "were such as had been dried in a heap of the sand. In any other way it would be impossible to kill them without breaking into small pieces from the extremely fragile quality of the arms or rays."

Another pretty species is that called the daisy brittle-star. The disk presents an intermingled surface of short spines and plates, which gives it some resemblance to a daisy flower, and few daisies, we are told, can show such beauty of form and colour as this little sea-star. The Shetland specimens are much larger and more vividly coloured than those of the English coast.

The dotted brittle-star is a very small species, first obtained by Mr. Goodsir, from the stomach of a cod. The body is only one-eighth of an inch in diameter; the rays are seven times as long as the disk is broad. The spines are short and pointed, arranged in lines on prominent transverse ridges. The whole surface of the ray and spines, when highly magnified, presents the appearance of being finely frosted. The colour is pinkish grey. For the minute description of these several species of brittle-star, and of others which cannot here be noticed, we must again refer the reader to Professor Forbes's valuable work. The notice of the dotted brittle-star is there commenced in the following pleasing strain:—"The stomachs of fishes are often zoological treasuries. The haddock is a great conchologist. In his travels through the country of the mermaids, he picks up many curiosities in the shell way. Not a few rare species have been discovered by him; and the ungrateful zoologist too frequently describes novelties without an allusion to the original discoverer. As haddocks are not in the habit of writing pamphlets or papers, the fraud remains undiscovered, greatly to the detriment of science; for, had the describer stated to whom he was indebted for his specimen, we could form some idea of its habitat and history, whether littoral or deep sea—very important points in the economy of the mollusca—important not only to the malacologist, but also to the geologist. Like the haddock, the cod also is a great naturalist; and he, too, carries his devotion to our dear science so far as occasionally to die with a new species in his stomach, probably with a view to its being described and figured by some competent authority. The cod is not so much devoted to the mollusca as to the echinodermata; and doubtless his knowledge of the ophiuræ exceeds that of any biped. It was a cod that communicated the pretty little species, the dotted brittle-star, to my friend Mr. Henry Goodsir, at Anstruther, and as far as that gentleman could learn, it would appear the industrious animal had observed and entrapped this new ophiocoma in the North Sea, near the Dogger Bank."

BRITTLE-STARS. (*Ophiocoma Agassiz.*)

WE were amused at the staid and sober demeanour of the young camels. Instead of the frisky playfulness and grace of other young animals, they had all the cold gravity and awkwardness of their dams.—ROBINSON'S *Palestine.*

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